# KPDES FORM SDAA

# Kentucky Pollutant Discharge Elimination System (KPDES)

## Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

## I. Project Information

**Facility Name: Monties Resources, LLC, Corn Creek Job**

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| **Location: Corn Creek at or near the mouth of Steel Hollow** | **County: Whitley** |

**Receiving Waters Impacted: Corn Creek**

## II. Socioeconomic Demonstration

1. **Define the boundaries of the affected community:**
(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

This mine site if found approximately 2.0 miles SW of Woodbine in the Watershed of Corn Creek in Whitley County, Kentucky. The immediate area is bounded by Knox County two miles to the northeast and immediately south of Whitley County is Campbell County Tennessee with Laurel county found approximately 3.0 miles to the north east.

2. **The effect on employment in the affected community:**
(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

This mine site will employ 9 people for a period of from 5 to 10 years. The average wage will be $900.00 per person for a 40 hour work week which is $8,100.00 per week of capital gain for 9 families in this immediate area. This also will lead to numerous support jobs, which statically shows that for every mining job created 3 support jobs area likewise created, in the surrounding areas of southeast Kentucky, north east Tennessee and southwest Virginia. As companies from these areas supply a variety of supplies and services from these areas to this mine. The current national unemployment average is 9.5% , the statewide average is 10.9% with the Whitley County average at 7.4%. The jobs provided by this company, whom has several other mine sites in the near vicinity of this mine site lends to a host of better opportunities for this area of Whitley County, KY, such as increased revenues for local grocery stores, the housing market, and most other retail outlets.

**II. Socioeconomic Demonstration- continued**

**3. The effect on median household income levels in the affected community:**
(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

Whitley county currently has a median household income of less than $26,000.00, these proposed jobs would provided those employed at this site with an average annual income of approximately $45,000.00 well above the overall average for this county. The average of homes in Whitley County below the national poverty level is 27.7% the influx of these high paying jobs would help to elevate Whitley County above poverty levels.

**4. The effect on tax revenues of the affected community:**
(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

The expected revenues from just the employees alone would increase the county revenues by over $400,000.00 dollars per year, plus the increase expected from sales at the local retailers as well as the tax revenue from the coal mined and sold. The mine expects to have an average annual coal production of; 250,000 tons with an average selling price of $52.00 per ton which would provide for an income of $1,300,000.00.
The recoverable coal reserves are also taxed on a per ton basis for:
Federal Excise Tax: $1.10 / ton
Reclamation Tax: $0.15 / ton
KY Severance Tax: 4.5% of the net selling price which would average $2.21 per ton.
Tax on resources recovery would be approximately $3.46 per ton which would be on an average yearly production of 250,000 tons x $3.46 / ton = $865,000 in revenue for the State and Federal tax base.

The negative impact of any mining operation is elevated noise levels, exposure to rather large truck traffic and elevated noise levels. The planned mining operation would at completion of mining increase the overall value of the due to the fact that existing previous unreclaimed mine sites would be reclaimed and the overall post-mining land use of this property would be of greater use than the pre-mining land use which was scrub forest and inaccessible unusable steep terrain.

## II. Socioeconomic Demonstration- continued

**5. The effect on an existing environmental or public health in affected community:**
(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

The jobs provided by this company would increase the overall health of the employees in that health insurance would provide for better care than what being on public assistance could provide. There would not be a degradation of the environmental health of the community based on the fact that due to strict environmental controls placed on the coal company by the Federal and State oversight agencies noise, and dust pollution must be maintained within regulatory limits.

**6. Discuss any other economic or social benefit to the affected community:**
(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

The overall positive value of this mining operation would be direct employment in well paying jobs over a sustained period of time, thereby reducing the overall poverty level of the County and increasing the overall income of the people of this area as well as the tax base for the County and Kentucky as a whole. The land of this site would be improved due to the strict reclamation guidelines for post-mining land use to re-grade the disturbed lands to the approximate original contour and to reseed all disturbed areas with beneficial vegetative species as well as planting of tree species native to the area.

This mining operation would also escalate indirect jobs in that the local country stores in the general vicinity of the mine site would realize an increase in grocery sales from the mine employees, local markets such as hardware stores would see an increase in home supplies, new car and truck sales would also become evident as well as clothing sales appliance sales as well as direct supplies sold to the mining operation such as: diesel fuel, grease, oils, fire extinguishers' just to name a few of the many mine supplies necessary for the day to day general mining operations.

## III. Alternative Analysis

**1. Pollution prevention measures:**
(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

This mine site is designed to use sedimentation ponds to trap surface water run-off from the permit area to be retained for a period of time to allow the sedimentation to be filtered out of the water before it is released to public water ways. Reseeding of disturbed areas in a timely manner along with minimizing disturbed areas prior to mining will help reduce increased erosion and excessive siltation. It had been studied and considered to collect surface water run-off in each of the 9 sediment ponds and then transferred to one holding tank and either transported by truck or pipe line installed to the nearest water treatment plant located at Corbin, Ky. The trucking would involve a constant fleet of trucks to haul the volume of 8.44 ac. feet or 2,750,202 gallons of water in a 24 hour period, or use water lines to a water treatment plant to treat this volume of water, which would have to be upgraded to treat this type of water. In both cases of alternative treatments would be in excess of hundreds of millions of dollars which would negate any beneficial capital gains from this mining operation.

**2. The use of best management practices to minimize impacts:**
(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

**Best management guidelines of the Division of Water are implemented into the mine design of this permit application to minimize adverse impacts to the environment, these "BMP's" are :**

- **Utilize diversion ditches to direct run-off to silt structures**
- **Re-grade and shape disturbed areas to a uniform post-mining slope**
- **Minimize surface disturbance whenever practicable**
- **Re-seed and mulch disturbed areas as soon as possible**
- **Placement of rip-rap in drainage areas to control erosion**
- **The use of sediment control techniques; such a strategic placement of hay-bales an silt fence in natural and man-made drainways.**

**3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:**
(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

It is planned that this mining operation will use the water contained within the sediment control structures to control dust within the mine area by watering of the mine roadways, watering of reclaimed areas with the use of a hydro-seeder. After mining is complete the structures retained as permanent ponds will be used for watering of domestic livestock and also the native wildlife in the vicinity. The water can also be used for a source of agriculture water; i.e. watering of gardens, lawns, etc.

## III. Alternative Analysis - continued

**4. Application of water conservation methods:**
(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

Primarily the use of any water contained within the 9 silt structures of this mine site would be used for the mine site to control fugitive dust along roadways and to water re-seeded mine areas, also after mining these structures would be utilized by the landowners for a source of agriculture water, and livestock. This supply of water could be shipped to the nearest water treatment facility at Corbin, KY whom would have to redesign their treatment plant at an estimated cost of approximately fifteen million dollars to be able to treat this type of water. The volume of water which is typically in excess of two million gallons per day would have to be transported to this site either by truck, which would require 550/ 1000 gal. tanker trucks with each transporting five loads each per day to haul the maximum of 2,750,202 gallons of water if these ponds were a maximum daily capacity. The trucking cost would be 550 trucks at $50.00 per load times five loads per day would equal a daily trucking cost of $137,500.00. Pipeline transportation would require at a minimum for construction thirty two dollars per foot with two pumping station at ninety thousand dollars each. The average pipeline installation would be; 5 miles x $32.00 / foot = $844,800 + $180,000.00 pumping stations =
$1,024,800 x fifteen million dollars of plant upgrade = $16,024,800.00 for pipeline transportation.

**5 Alternative or enhanced treatment technology:**
(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

**The proposed cost for installation of water treatment facilities at this mine site, silt ponds, are estimated to cost on average; $4,500.00 each X 9 on bench ponds would equal a total installation cost of: $40,500.00. The alternative to these ponds is that there is none. The Department of Natural Resources requires that ponds be built to control surface water run-off. So alternatively the water could be removed from these pond and transported to the closest treatment facility for alternative treatment and or use. The cost of such would be:**

**Initial construction cost of all nine ponds:**

**$4,500.00**

**Upgrade to the closest treatment facility;**

**$15,000,000**

**Truck transport of the water or pipeline transport respectively:**

**Trucks: daily cost: $137,500.00, weekly; 962,500.00, yearly; $5,390,000.**

**Pipeline: construction cost alone: 1,024,800.**

**Total initial cost would be approximately; $20,000,000.00**

**Yearly cost would not be considered as the actual cost of alternative treatment installation would prohibit the mining operation from be completed.**

## III. Alternative Analysis - continued

**6. Improved operation and maintenance of existing treatment systems:**

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

Sediment structures are designed to hold a 10 year 24 hour storm event while allowing for settling time of sediment prior to discharge into the receiving streams to meet effluent discharge guidelines. Discharge from these structures is precipitation dependent and these structures are designed to safely impound and discharge runoff from the project area while limiting impact to public waterways. These structures are cost effective in relation to the overall mining operation. These ponds are monitored on a monthly basis to insure regulatory compliance and are treated as necessary to comply with regulations. The yearly cost for mine management of these ponds is less than five hundred dollars per year per pond. There are no available existing treatment systems within any geographic region of Kentucky that is equipped to handle the type of discharge from any given mine site. The cost for any alternative site for treatment of these waters would require a multimillion dollar investment that would not return the cost over the typical five year life span of this type of mining operation.

**7. Seasonal or controlled discharge options:**

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

The ponds to be used for this mine site are not designed for controlled releases, they are designed to control trapping efficiency of surface water run-off to allow sufficient time for sediment to filter out of the water before it discharges from the pond. Discharges occur after the pond has been filled to capacity a minimal discharge is allowed by the trapping efficiencies of the designed outlets; i.e. either an open spillway or pipe. As water discharges the volume of water in the pond is lowered below the effluent discharge levels with the cycle recurring as run-off fills each pond. The natural filtering system of nature such a vegetative cover and rock is removed in the mining and constructive process of these ponds which in effect replace the natural filtering system of nature with a man-made filtering system; the sedimentation pond. The proposed ponds of this operation are limited in size due to being on-bench ponds which reduces the cost of construction of $4,500.00 each. To retain wastewaters for controlled release would necessitate the construction of off bench ponds in the natural drain ways, equipped with release systems such a mechanical or hydraulic gate valves. The construction cost of embankment ponds on average is $12,500.00 per pond plus the cost of valves which average $8,000.00 per gate installed. This system could only be used after a complete biological study has been done plus submittal and approval of 401 and 404 water permits which would delay the planned operation by at least two years. The biological study would cost approximately $80,000.00 per structure which would mean a pre-mining study cost of: $720,000.00 before mining would ever be initiated. Once mining was started the cost of building such ponds would average $20,000.00 per pond which in all consideration would prevent any mining due to the adverse economics of this type of structure.

## III. Alternative Analysis - continued

**8 Land application or infiltration or disposal via an Underground Injection Control Well**

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of .proposed treatment system.)

The maximum capacity of the aggregate of all of the designed ponds is 8.44 ac. feet or 2,750,202 gallons of water. Which the proven method and most cost effective method to date is the utilization of sediment ponds. The amount of water accumulated within these ponds could not be discharge into a shallow or deep well in that the injection of this amount of water into the ground would destabilize the overlying strata to possibly causing landslide. The injection of this amount of water into any existing abandoned deep mine would first cause the proposed site to be st permitted through the division of permits whom would require a demonstration that the induced water would not cause a possible blow out, such as the Martin County ordeal, thus impacting local housing, streams, people, livestock, etc. Environmental impact studies would be required, additional permitting actions, additional ponds being built, which in all would cost several hundred thousand dollars thus making the entire mining project un-feasible.

**9 Discharge to other treatment systems**

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

**Pip There are no public or private treatment systems within in any local geographic region of this mine site that has the design or capacity for treatment of over 2 million gallons of surface water run-off. The waterfiltration plants local to this mine site do not have the capacity for treatment of this volume of water. The closest treatment facility tothis mine site is the City of Corbin in Whitley County which is five miles from this site. First it would be required to complete impact studies for the construction of pipelines to this site. The existing plant would have to be upgraded, water line installed, permits obtained for water line construction, easements obtained from private landowners and the design and final construction of the pipeline plus installation of at least two pumping stations.**

**The cost would be;**
**Envirnomental impact studies: $275,000.00**
**Plant upgrade: $15,000,000.00**
**Filing of required permits: $150,000.00**
**Pipeline construction:**
**5 miles; 26,400 feet x $32.00/ foot = $844,800.00**
**2 pumping stations @ $90,000.00 each = $180,000.00**
**Approximate total cost for discharge to alternative treatment systems+ $16,449800.00**

**IV Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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|---|---|---|---|
| **Name and Title:** | **Bart Montanari** | **Telephone No.:** | 606-549-3777 |
| **Signature:** | | **Date:** | **11-12-09** |

# Kentucky Pollutant Discharge Elimination System (KPDES)
# Instructions
# KPDES Permit Application Supplemental Information

## SECTION I – PROJECT INFORMATION

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|---|---|
| **Facility Name**: | Provide the name of the facility |
| **Location:** | Provide the physical location of the proposed project |
| **County:** | Indicate the county in which the facility is located |
| **Receiving Water Name:** | Indicate the water body into which the facility discharges or plans to discharge. |

## SECTION II – Socioeconomic Demonstration

For each factor provide a discussion of expected positive and negative impacts. Include appropriate support documentation.

## SECTION III – Alternative Analysis

For each alternative compare the feasibility and costs of the alternative to the feasibility and costs of the proposed project and its treatment system. Include appropriate support documentation.

## SECTION IV - CERTIFICATION

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| **Name and Title:** | Indicate the name and title of the person signing the form. |
| **Telephone No.:** | Provide the telephone number of the person signing the form. |
| **Date:** | Indicate the date which the form was signed. |

This form being part of the permit application must be signed as follows:

**Corporation:** by a principal executive officer of at least the level of vice president
**Partnership or sole proprietorship:** by a general partner or the proprietor respectively